

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* RAGHAVAN RAJAGOPALAN, WILLIAM L. NEUMANN  
and DENNIS L. NOSCO

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Appeal No. 94-2280  
Application 07/627,175<sup>1</sup>

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ON BRIEF

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Before GARRIS, PAK and OWENS, *Administrative Patent Judges*.  
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 1 and 2. Claims 3-16, which are all of the other claims remaining in the application, have been withdrawn from

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<sup>1</sup> Application for patent filed December 14, 1990.

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consideration by the examiner as being directed toward a nonelected invention.

#### *THE INVENTION*

Appellants' claimed invention is a ligand which is useful for forming radionuclide complexes. Claim 1 is illustrative of the subject matter of the invention and is appended to this decision.

#### *THE REJECTION*

Claims 1 and 2 stand rejected under a judicial doctrine as being directed to an improper Markush group.

#### *OPINION*

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with appellants that the aforementioned rejection is not well founded. Accordingly, this rejection will be reversed.

The test for whether a Markush group is proper is whether all of the compounds in the group have in common a functional utility and a substantial structural feature disclosed as being essential to that utility. See *In re Harnisch*, 631 F.2d 716, 722, 206 USPQ 300, 305 (CCPA 1980); *Ex parte Della Bella*,

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7 USPQ2d 1669 (Bd. Pat. App. 1984); *Ex parte Hozumi*, 3 USPQ2d 1059, 1060 (Bd. Pat. App. 1984).

In the present case, all of the ligands have in common the functional utility of forming radionuclide complexes, and share the substantial structural feature of repeating methylene units separated by an N, P or As atom, which appellants' disclosure indicates is essential to that utility. The examiner's rejection therefore will not be sustained.

*DECISION*

The rejection of claims 1 and 2 under a judicial doctrine as being directed to an improper Markush group is reversed.

*REVERSED*

BRADLEY R. GARRIS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
CHUNG K. PAK	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	

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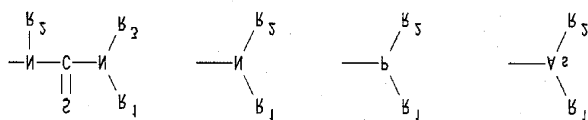
TERRY J. OWENS )  
Administrative Patent Judge )

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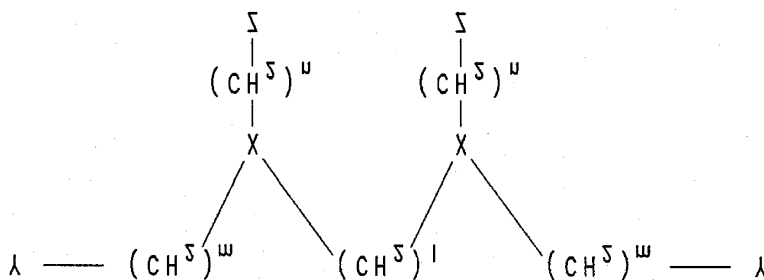
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APPENDIX

may be selected from the group consisting of  
is selected in the same manner as a group or further  
polyoxalanyl, or mono- or poly- glyoxalanyl; and z  
ethyl, vinyl, polyoxalyl, glyoxalyl, mono- or poly-  
selected from the group consisting of polyoxo-  
wherein  $B_1 - B_3$  may be the same or different and are



atom; x is selected from the group consisting of  
from s to z; u is from s to e; x is an n, b, or y  
wherein j and w may be the same or different and are



and j and w may be the same or different and are

j. a j and w may be the same or different and are